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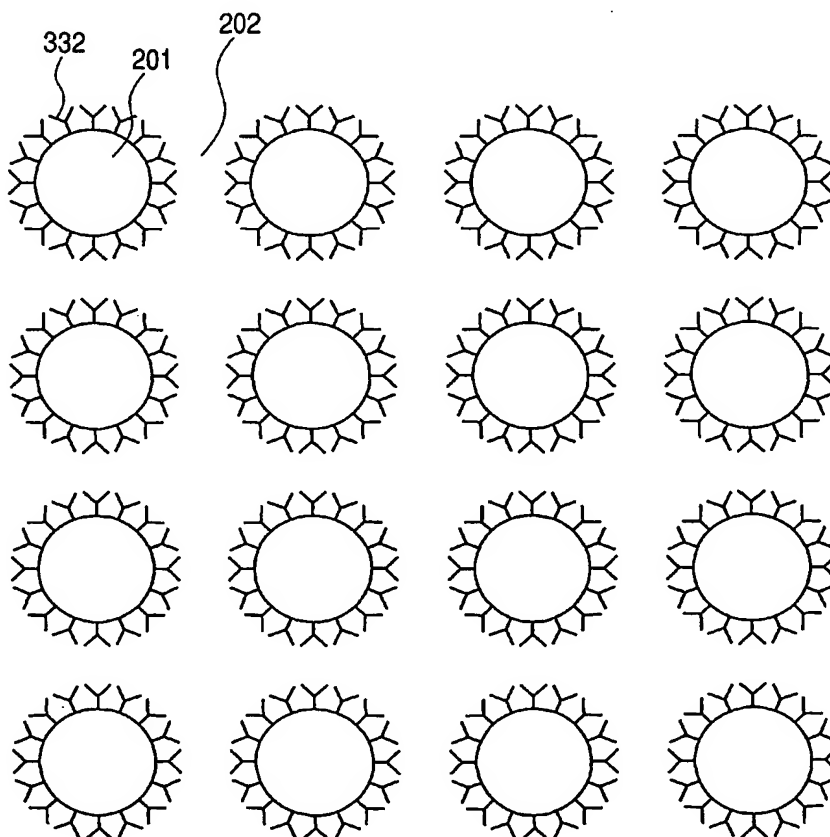
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[Continued on next page]

(54) Title: **SENSOR FOR DETECTING A TARGET SUBSTANCE IN A FLUID**



(57) Abstract: A device for detecting a target substance in a fluid is provided. This device comprises a periodic structure having a vacant portion for passing the fluid containing the target substance and a solid portion arranged regularly and capable of transmitting an electromagnetic wave, an electromagnetic wave-projecting means for projecting the electromagnetic wave to the periodic structure, and a detecting means for measuring the magnetic wave emitted from the periodic structure to detect a change in periodic distribution of a refractive index. This sensor is highly sensitive in a small size.

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